ORIGINAL Pages 1-40 1 2 IN THE UNITED STATES DISTRICT COURT 3 FOR THE NORTHERN DISTRICT OF CALIFORNIA BEFORE THE HONORABLE SPENCER WILLIAMS, SENIOR JUDGE 4 5 6 ROGER SCHLAFLY, 7) Case No. Plaintiff, 8 vs. 9 PUBLIC KEY PARTNERS, et al., 10 Defendants. RICHARD W. WIEKING 11 December 6, 1995 San Jose, California 12 13 Reporter's Transcript of Proceedings 14 **APPEARANCES** 15 For the Plaintiff Dr. Roger Schlafly, In Pro Per P.O. Box 1680 16 Soquel, California 95073 17 For the Defendant Law Offices of Thomas R. Hogan Thomas R. Hogan, Attorney at Law Public Key Partners 60 South Market Street, Suite 1125 18 San Jose, California 95113 19 Tomlinson, Zisko, Morosoli & Maser For the Defendant Thomas E. Moore, III, 20 RSA Data Security, Inc. Attorney at Law 21 200 Page Mill Road, Second Floor Palo Alto, California 94306 22 Reported By Lee-Anne Shortridge 23 Certified Shorthand Reporter #9595 24 Appearances Continued on Next Page 25 Computerized Transcription by StenoCat

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     December 6, 1995
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                 THE CLERK: Civil matter C-94-20512-SW, Roger
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     Schlafly vs. Public Key Partners, et al.
                 State your appearances for the record.
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                 THE COURT: I have it here. Mr. Thomas Moore for
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     defendant RSA.
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                 MR. MOORE: Yes, good morning, Your Honor.
                                                              I'm Tom
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     Moore.
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                 THE COURT: And for defense, Tom Hogan for PKP.
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                 MR. HOGAN: Yes, Your Honor. Good morning.
                 THE COURT: Patrick Flinn for CKC.
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                 MR. FLINN: Yes, for Caro-Kann. Good morning, Your
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     Honor.
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                 THE COURT: Good morning, Mr. Flinn. And the
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     intervener.
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                 MS. GOLD:
                            Jana Gold for CKC.
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                 THE COURT: And Mr. Schlafly.
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                 MR. SCHLAFLY: Yes. Good morning, Your Honor.
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                 THE COURT: Do you feel like you're outnumbered, Mr.
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     Schlafly?
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                 MR. SCHLAFLY:
                                Just a little bit.
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                 THE COURT: In numbers at least, right?
2.3
                 THE CLERK: On for motions.
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                 THE COURT: This is an alphabet soup. I've been
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     trying to identify all these letters.
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What I'd like to do is talk a little bit about the patents first, and then the business litigation secondly. Also, if you stack up all the papers I have and see what I have to work with, it's about like this (indicating). The cases and facts raise very interesting questions and very interesting motions.

I'm not going to decide it today. I've got a lot of reading to do. But I think it'll be good to discuss the patent problems first and then the business allegations, and maybe you can summarize it or give me a little feeling for your position, and then I'll take it under submission. It's going to be very complicated.

But we have Mr. Schlafly suing on the two patents, the two Stanford patents, and also on the MIT patent, and he also is suing on the anti-trust unfair business practice and so forth in his complaint.

CKC is defending the validity of the Stanford patent, if I understand that.

And RSA is defending the MIT patent and also depending on the anti-trust.

MR. MOORE: Yes, Your Honor. We are also defending on the so-called Schnorr patent.

THE COURT: Okay. And now I understand there's a parallel action up in the Oakland Federal Court in which CKC is suing RSA on the question; is that correct?

MR. FLINN: Close, but precision matter is a little 1 2 bit here, Your Honor. I'll step up. There are two other cases 3 pending in this court that are connected to this litigation. The one you referred to in Oakland that is now pending before 4 5 Judge Chesney is brought by Caro-Kann's parent corporation, Cylink, against RSA, but it raises the same patent as Mr. 6 7 Schlafly is challenging in this case. 8 In addition, as Your Honor may be aware, there is a 9 relatively newly filed lawsuit brought by RSA Data Security in 10 front of Judge Orrick, and the defendants in that case are 11 Cylick, Caro-Kann and Stanford University, and the validity of 12 the Stanford patents are raised in that litigation. 13 THE COURT: Just the Stanford patents? MR. FLINN: Just the Stanford patents. 14 15 THE COURT: I think we have a lot of judges. 16 Okay. Now, as I understand it, the facts are that Mr. Schlafly was the subject of litigation at one time and the 17 18 matter was settled, and then maybe you can just give me a brief summary of the facts, because you can probably do a better job 19 20 than I can. I look at my diagrams, I'm organized by colors and 21 arrows, but --22 MR. FLINN: Our suggestion, Your Honor --23 THE COURT: Mr. Hogan?

MR. FLINN: -- is that Mr. Hogan do that, yes,

because although he's adverse to Mr. Schlafly, the partners, Mr.

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Moore and I, our clients are obviously feuding substantially. We're in litigation in other cases and I think Mr. Hogan, who's done a marvelous job between Scylla and Charybdis that our clients represent, he ought to be the one. He's in the best place to do this.

MR. HOGAN: Thank you, Your Honor. As the court understands, the landscape has changed to some extent so the patents are now being defended by the actual holders, the intervener, Caro-Kann Corporation and RSA Data Security Inc.

PKP, the demise of which occurred relatively recently, is still being represented by myself. And of course in that regard, I'll be addressing the latter part of what Your Honor announced you wanted to hear about the torts, the unfair business practices, et cetera.

But historically Your Honor is correct. What happened was there was litigation in Chicago involving patent, alleged patent infringement by a company that the plaintiff here, Mr. Schlafly, was a member of.

THE COURT: Yeah.

MR. HOGAN: And that resulted in an injunction against those parties, Mr. Schlafly included. That is simply -- that, simply put, prevented them from infringing those patents in the future.

This case then arose, I think at least in part, after Mr. Schlafly became aware of a letter that was written by,

and on behalf of, the partnership, Public Key Partners, to AT&T.

THE COURT: Yeah.

MR. HOGAN: Remember the letter, Exhibit D to the amended complaint I believe, which basically had discovered that AT&T, in some of the product literature they had sent out, was making use of some material that was subject to the patents, the Stanford patents I believe in particular, and the letter written on behalf of PKP essentially advised AT&T that they were concerned about whether their use of these, of the patents, might be in violation of that judgment out of the Chicago court.

THE COURT: Okay.

MR. HOGAN: When the plaintiff became aware of that letter, and the plaintiff at that time as we now know through discovery, and principally the taking of the deposition of Mr. Schlafly which took place over several days, the plaintiff was involved with that, or was a successor of that organization, and had done a lot of the software design of the product that AT&T was then marketing.

THE COURT: He wrote and said, basically, "You don't say those nasty things about me."

MR. HOGAN: Exactly. Of course, although he never mentioned it in the letter, nor any entity that he was then involved with, nevertheless, he believed that that caused him harm and so he protested loudly to PKP. He, of course, requested from PKP some information about their license policy,

licensing policies. You'll recall that PKP was formed, I believe, in April of 1991.

MR. MOORE: '90.

MR. HOGAN: '90, thank you, April of 1990. And as part of that formation, they had sent a letter to a great many entities announcing that they were the holders of these various patents, the MIT patents and the Stanford patents, and advised the world at large interested in cryptography that they would be more than willing to license these patents on a nondiscriminatory basis.

Mr. Schlafly -- among others of course, Mr. Schlafly wrote a letter to PKP in effect saying, "Tell me what your licensing policy is." He received a response, "We're prepared to discuss the license with you at any time."

But he never -- essentially, he never followed up. He was never refused a license.But those two events are connected; that is, his inquiry about getting a license and the infamous letter to AT&T. That prompted, I believe, his action in this lawsuit.

THE COURT: And he filed this case before this litigation we have, Roger Schlafly versus PKP and RSA Data.

MR. HOGAN: Exactly, Your Honor. In a nutshell, I believe that's it. Obviously the core of the case is the patent allegations, but you'll remember, of course, there were numerous allegations, many of which Your Honor dismissed earlier, but

there are some, some still remaining.

THE COURT: All right. And we have before us today the plaintiff's motion for partial summary judgment on the question of patent validity.

MR. HOGAN: Correct.

THE COURT: And then the CKC's cross-motion for summary judgment on the Stanford patent validity.

MR. HOGAN: That's correct, Your Honor.

THE COURT: And RSA and PKP's motions for partial summary judgment on the business and anti-trust claims and so forth.

MR. HOGAN: Exactly, Your Honor.

THE COURT: Okay. Anyone want to discuss anything on the merits of this first motion, or your motion? Just summarize what it is.

MR. HOGAN: That's the business torts motion. Your Honor, of course, as I said, we did take the plaintiff's deposition over several days. Your Honor had, in your earlier ruling in, I think February, basically said, "Obviously the pleadings are sufficient. Let's get the facts."

We went to Mr. Schlafly and took his deposition and no facts ever came up. There were no damages. As I mentioned, he's got a claim in the alleged complaint, I believe, for two million dollars. We asked him about every way you can possibly ask somebody how he got to that number, and the bottom line

answer was, "It was a number I picked out of the air. I had to have a number, so I put it in there."

He never had a product, doesn't have a product today, never developed a product. He is essentially a designer, a software designer, and has business relations, as I understand it, with a company that provides his designs to AT&T, which then uses it in a product. So he's never been in the marketplace, never tried to be in the marketplace.

Of course, essentially if you cut it away, it seems to me what he's really saying is that this letter, again the infamous Exhibit D, in effect chilled the marketplace you might say. It discouraged him from doing things that he might otherwise have done.

But he doesn't allege any facts that he actually did any of these things. Whatever his relationship with AT&T or the corporation that provides the product, or rather the software, to AT&T, ISC or whatever it is, whether you call it a contract or a business relationship of any sort, again, there's no evidence whatsoever that PKP or anybody, any of the defendants, interfered with that relationship that continues to this day. As I think Mr. Schlafly admitted in his opposition, he hasn't been entirely happy with what AT&T has done in terms of marketing, et cetera, but he can't blame that on the defendants.

So we think there's simply no facts. When we went through his opposition and the way he pled it, the defendants

now know what they have to respond to. We went to him and said, "Tell us. Give us everything."

And I must say, on behalf of PKP, Mr. Schlafly was very forthcoming. Everything we asked, he answered. But there simply wasn't any evidence, none.

THE COURT: Thank you.

MR. HOGAN: Thank you.

THE COURT: Mr. Schlafly, in a motion for summary judgment, you have to come forward with all the factual issues which sustain your position. Do you have anything to add to what you put in your -- I'm not asking you to amend now, but do you have anything to add to the factual situation that you haven't included in your papers? I'm sure you're just --

MR. SCHLAFLY: I'm a little confused as to what -THE COURT: I'm sure you have disagreed with the

argument that you have nothing to show, but everything you have to show is in your papers, is that correct, evidentiary-wise to

18 | support your allegations of the anti-trust and so forth?

MR. SCHLAFLY: That's correct. But just -- I'm a little confused as to which motion we're going to talk about right now. You originally said --

THE COURT: Your motion for partial summary judgment on your claim for anti-trust, and you have a claim for patent validity, patent noninfringement, contractual relationships, unfair business practices, and anti-trust violations. Those are

what I call the business aspects, not the patent aspects of your 1 2 claims. 3 MR. SCHLAFLY: Okay. That's their motion. Μy motion has to do with the patent invalidity, and I thought we 4 5 were going to talk about that first. THE COURT: You can do that too. 6 7 MR. SCHLAFLY: But if we want to talk about --8 THE COURT: Mr. Hogan, I asked him to speak because 9 they all agreed he would do the best job of laying out the facts 10 so I could understand them, and I do understand all this. 11 was speaking primarily to those. He just mentioned the 12 anti-trust, interference with contractual relationship and 13 unfair business practices. So you, in your response to the motion for partial 14 15 summary judgment, you have set forth all the information you have that would support those, your claims, right? 16 17 In my opposition to their motion? MR. SCHLAFLY: THE COURT: 18 Right. That's correct. We haven't had a 19 MR. SCHLAFLY: 20 discovery cutoff yet, but that's what I have today. THE COURT: Everything you know is in there? 21 22 MR. SCHLAFLY: Yes. 23 THE COURT: Now, do you want to add anything else? 24 Now that you have the floor, do you want to speak to your patent 25 validity aspect or is there anything else you want to add?

is just a summary. I'm not going to decide it today, but I want you to have a chance to express yourself.

MR. SCHLAFLY: Sure, yes. I'd like to briefly summarize the patent invalidity arguments.

THE COURT: Okay.

MR. SCHLAFLY: There are several patents that I'm arguing are invalid, each on somewhat different grounds.

The first patent is the Stanford Diffie-Hellman patent, and I'm arguing that that's invalid based on a prior enabling disclosure that that is more than one year before the filing of the patent. There were four fully enabling disclosures of the invention.

THE COURT: Public knowledge, right?

MR. SCHLAFLY: And public knowledge, yes. They were -- the first one was at a National Computer Conference, one of the inventors gave a public talk. There were thousands of people at the conference. There were -- his talk was well attended. There were people there who understood it. There were -- I have copies of the viewgraphs that the inventor had that explicitly show a disclosure of the invention.

THE COURT: Okay.

MR. SCHLAFLY: Okay. There was another talk that the same inventor gave at IBM more than a year in advance. There was no confidentiality condition on it. It was -- there were people there. People attended. There were experts there

who understood it. There were -- and again, I have the slides from the talk that explicitly show an enabling disclosure of the invention.

Third, I have one of the other inventors, Hellman, went to a conference in Sweden which was a I Triple E conference. Anyone who's a member of that international organization could sign up and go. And he testified that he also gave an enabling disclosure of the invention.

Finally, I have a copy of a preprint, which is, which gives an enabling disclosure of the invention that is dated more than one year before the filing of the patent. So there are like four different enabling disclosures.

THE COURT: Okay. Thank you.

Response?

MR. FLINN: I will be very brief. As I understand the way we're going to proceed, we'll proceed seriatim patent by patent. That makes sense because the arguments are somewhat different, that is, the argument about the Diffie-Hellman patent is different than the argument about the Hellman-Merkle patent.

I did want to begin with one thing. I think it's appropriate to say I think Mr. Schlafly should be commended on the papers he submitted with respect to the patent questions. I wish some of the lawyers I deal with wrote as crisply and clearly as he has. I think the court has -- well, if you look at the papers, the issues are quite squarely presented.

THE COURT: I have heard a lot of nice things today so far.

MR. FLINN: Which is one of the reasons why we made a cross-motion, because I don't believe the underlying facts, or the actual evidentiary record, contains any factual disputes. We may characterize the record a little differently, and I'll address that in a second, but I think the matter is -- I think we agree the matter is ripe for resolution of the application of the questions of the law to the facts.

The first question is the printed publication requirement of the statute and whether or not that is a question of law. There's no dispute about that.

But I wanted to begin before particularly addressing the publication issue, because that is the question about Diffie-Hellman, just to help the court understand a little bit about the relationship of these two patents, and even set a ground work perhaps for the third.

The Diffie-Hellman patent is good to think of as the first one, because it's kind of a precursor. It allows two parties who have no method of secure talking in private to exchange a number and, together, come up with a key that, even if somebody overheard everything they said, they'd never learn the key. That was part, but not the whole thing, of the equation for how to do this public key cryptography.

The second patent, Hellman-Merkle, does two things.

It contains a particular way of doing actual public key where you have a public key and a private key. One locks the message, the other unlocks, and possessing one key is of no use to try and figure out the other key. It proudly claims the practice of public key, in addition to containing a specific implementation, but I'll reserve my discussion of that until we get to Hellman and Fine P.C.

But let's turn to the Diffie-Helman patent. The only invalidity argument being raised by Mr. Schlafly, or anyone else in this case, is that the publication, that a preprint, this paper, entitled New Directions In Cryptography, Exhibit U, constitutes a statutory bar.

Now, in Mr. Schlafly's statement, he spent some time discussing, quote, "public disclosure." That is not the standard. Under our patent laws, an inventor is free to tell the world about his or her patent more than a year before the application is filed. The fact that the public knows of the invention, all the details, enablement and everything else, is not the requirement.

The language of the statute is, quote, "printed publication." And it makes a difference that there are both words, both "printed" and "publication."

The way you can have your patent invalidated by the statutory bar is either if there is a printed publication more than a year in advance, or if somebody puts it in a product more

than a year in advance. So if you're out there telling the world about your invention and somebody gets to the market more than a year before you file your application, then you may be in trouble.

But we're not dealing with that situation here.

Here the issue is was this exhibit, Exhibit U, and particularly the so-called preprint of it, a printed publication?

Now, the references in the papers to viewgraphs and thousands of people attending a conference are completely irrelevant. The evidence, and if you look at the record, is that the viewgraphs are not copies. They were not distributed and they were not made available. They were shown, but they were not distributed or available to anyone. They went back in the inventor's briefcases.

That is a different question than the question of actual copies of the paper in manuscript form that were sent out.

Now, I want to make one observation as I discuss what the record shows about that. The paper itself, in its published version, New Directions In Cryptography, and that is the form that appears in Exhibit U, was before the patent office. On the very first page on the footnote, it specifically recites the facts that Mr. Schlafly has advanced, that there was a manuscript sent out in June 1976 and that portions of the work were presented at the National Computer Conference at Lenox,

Massachusetts and at a conference in Sweden to the patent examiner to whom this court is required to defer.

Now, the facts about the public presentations of this and the dates are clearly indicated in the published version of the paper. This is not anything that was not, that the patent office didn't know about.

And again, before I discuss the record, I also have to point out procedurally on summary judgment, the court has to take into account two facts. The first is Mr. Schlafly has the burden of proof, and he has to survive a summary judgment, our cross-motion. He has to have a sufficient quantum of evidence such that a reasonable juror could find not by a preponderance of the evidence, but by clear and convincing evidence that in fact there was a printed publication.

So to the extent that in the 15 or so years that have elapsed, there is simply an absence of detail here, that absence of detail must work against Plaintiff in this case, not the patent owners.

Now let me turn specifically to what the evidentiary record is. The evidentiary record is that neither of the inventors, neither Diffie nor Hellman, remember any particular dissemination of this article to anybody. The testimony that you see relates to practice and belief that, according to practice, it was customary to circulate some copies of the preprints.

Now, the one thing that Mr. Schlafly said in his oral statement that I do believe is simply unsupported by the record was he said there were no restrictions. The record, in fact, is the opposite. Page 77, line 15 of the Hellman deposition, which is in the rebuttal materials Mr. Schlafly submitted, Dr. Helman specifically said that he did not make the copies available. He said not unrestricted.

So he specifically said that his practice was simply not to make copies of this available to anyone. He was asked by -- the only evidence that we have is simply that it's some number between 5 and 100, and Mr. Schlafly deliberately chose not to get any more specific about that, would have been given out potentially according to the practice that Dr. Hellman recalled he followed at the time.

Now, it turns out that if we look at the case law, the actual number is not the relevant criteria. And we've all cited the same case, so it's not as if there is an uncertain geography on the case law in this area.

The critical issue is public access. Can someone, on their own, go out and get it with reasonable diligence? And where the inventor has testified that he does not give this out on an unrestricted basis, someone who doesn't know the inventor, who hasn't convinced the inventor to give him a copy of the paper, does not get access.

There is simply no evidence that someone out there

-- you couldn't get it in a library. You couldn't get it on any kind of on-line computer. You couldn't go into a book store and buy it. You couldn't go into a library and find it.

It was not something that if you knew about it, you could be sure that you could go out and get it. You had to convince the author of the paper that you had a legitimate reason to get it.

That's all the record is on the publication, and the case law does not say that there is a magic number. Certainly one of the cases involved, I believe, on the order of 50 copies being distributed under conditions that did not allow members of the public to necessarily get access, and that was not held to be a publication, whereas one copy in the library properly indexed can be a publication. It's not numbers. It's access. There's simply no evidence of access.

THE COURT: On the directions of it, the publication did come in November of '76.

MR. FLINN: That's correct, and that's less than a year before the publication date; that is, the patent was filed within a year of the appearance of the published version of the paper.

THE COURT: Okay. Thank you.

Just a few words, Mr. Schlafly, and then we'll go on to some of the other matters.

MR. SCHLAFLY: Yes, I'd like to respond to a couple

of those points.

THE COURT: I'll be deciding this on what I see in the documents, so why don't you emphasize what I should look for? That's why I'm having oral discussion here.

MR. SCHLAFLY: Yes, okay. I'll agree that what constitutes a printed publication is a matter of law and that the law does refer to printed, the phrase "printed publication."

However, if you look at all the court decisions on this, they don't, never do they key on the exact technology of what constitutes printed or what constitutes publication. The technology is kind of irrelevant.

The question is, was an enabling disclosure made to the public, and that's the issue that all the court decisions that involve this key on. I think you'll find that if you look at the court decisions.

Okay. Next Mr. Flinn says that the, the disclosures that I talked about were disclosed to the patent office, and were noted in the patent file.

I don't think that is true. If you look at the evidence, that is just simply not true. What the patent file does disclose is it says that the <u>New Directions</u> article was submitted to the journal in June of 1976, and it also refers to a publication at the National Computer Conference in June of 1976.

However, neither of those are among the four public

disclosures that I've argued in my brief that constitute enabling prior art to invalidate the patent; that is, if you submit something to a journal, normally the journal, the journal sends it out to an editor or something. That's not revealed to the public, and I'm not claiming it is.

The conference publication that occurred was submitted some number of months in advance, and the actual publication that appeared does not include the enabling disclosure.

However, the testimony and slides from the talk show constitute that there was an enabling disclosure made at the talk that was given at that conference.

THE COURT: That's the clear -- that's the evidence proof requirement, clear and convincing evidence requirement.

MR. SCHLAFLY: Clear and convincing evidence. I think I have clear and convincing evidence of those four enabling disclosures.

I'd like to respond to a couple of other things.

THE COURT: Okay.

MR. SCHLAFLY: As far as Professor Hellman distributing the preprints, Professor Hellman, he did say he distributed between 5 and 100 preprints. Unfortunately, he could not remember exactly when he distributed them. He did say that it was, it was normally his practice to distribute preprints to whoever asked for them, but he couldn't remember

exactly what procedures he followed with this particular paper. 1 2 However, I have a copy of the paper. The copy of 3 the paper is dated August 1976, and it's not stamped confidential or anything like that. And in the lack of any 4 other evidence to the contrary, I think a copy of the paper that 5 6 has a date stamped on it and is not stamped confidential or 7 anything is clear and convincing evidence. 8 THE COURT: Is it authenticated? I mean, where did you get it? You're saying -- did you -- well, where did it come 9 10 from? I did some calling and I found a 11 MR. SCHLAFLY: cryptographer at IBM. I asked him to go to his files and see 12 13 what he had. He pulled it out of his files and sent it to me. 14 He doesn't remember exactly what date he got it or how he got it. They've been in his files since the '70's and he just 15 16 didn't remember. But it does clearly say August 1976. It's clearly a 17 18 preprinted paper that discloses the enabling embodiment 19 invention, and it's not stamp confidential or anything. 20 THE COURT: Okay. 21 MR. SCHLAFLY: Okay. That's all I have to say about 22 that patent right now. 23 THE COURT: Any more discussion on the other patent 24 that maybe we should take up at this time?

MR. FLINN: Briefly, Your Honor. Mr. Schlafly can

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1 move right to the Hellman patent and then I'll respond. 2 THE COURT: Pardon me? 3 MR. FLINN: Presumably he can go right to the next 4 patent. 5 THE COURT: All right. You're on again. 6 MR. SCHLAFLY: Okay. The next one is the 7 Hellman-Merkle patent, and this, my argument that this patent is invalid is based on it being inoperative, that it does not work, 8 9 it does not achieve its stated objectives, and the disclosed 10 embodiments do not enable someone to practice the claims. 11 THE COURT: Okay. You say the trap door doesn't 12 work? 13 MR. SCHLAFLY: The trap door knapsack does not work. 14 THE COURT: Okay. 15 MR. SCHLAFLY: Okay. What I mean by that is that 16 the whole idea of public key cryptography, which we can get into 17 if you want, is that there's one key for encryption and there's one key for decryption. The encryption key can be made public, 18 19 disclosed to anybody, but the decryption key you keep secret. 20 Anyone can send you a message because they get the encryption 21 key, but only you can decrypt it because you have the decryption 22 key. 23 That's what the Stanford inventors were trying to do 24 with this patent. And the concept -- the concept is a good one.

There are public key systems that do that.

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However, the embodiments that are described in the Hellman-Merkle patent do not do that, and that is because the ones they describe are insecure in that it's possible for someone to compute the decryption key from the public encryption key, which means anyone can decrypt the message.

THE COURT: You're saying it works in part, but not totally. The patent is only half effective?

MR. SCHLAFLY: It's not effective at all.

THE COURT: For what purpose?

MR. SCHLAFLY: Because the purpose is to send secret messages, and you cannot send secret messages with it because it's possible for someone else to take the encryption key and figure it out, and figure out the decryption key and decrypt the messages.

THE COURT: Okay.

MR. SCHLAFLY: Okay. Now, my evidence for this is that it has to do with a series of public papers that were published in the '80's in which several cryptographers did a thorough analysis of this and, in a series of papers, they published very specific algorithms, or methods, that can be used to, in cryptography jargon, break it; that is, they published papers that said, "Here, if you use this trap door knapsack method, we can use this method and decode your messages."

There's a whole series of papers that are published on this, and they were in respected referee journals. Nobody

questions the validity of that analysis. That analysis shows the trap door knapsack embodiments that are disclosed in the Hellman-Merkle patent don't work.

And it's a fundamental principal of patent law that you have to, you have to describe -- you have to describe, if you invent something, you have to describe an embodiment that works, and you have to enable somebody to practice the invention in a way that achieves the objectives and satisfies the claims.

Now, I should say I also have some, a couple of other arguments that have something to do with this. For one thing, the Helman-Merkle patent also claims to have a method of signatures, and for their method of signatures, they say that, they say, "Well, provided this trap door knapsack has high density, you can do signatures."

However, they don't give any clue as to how to produce a trap door knapsack of high density, so I say also it's not enabling for signatures on those grounds.

And also, I have an invalidity argument based on the patenting of a mathematical formula or mathematical algorithm, which is an argument against, argument for the invalidity of both of the Stanford patents, as well as the RSA patent. Maybe we'll get to that argument in more detail when we talk about the RSA patent.

THE COURT: Okay. But you're saying it has no -this patent has no beneficial use? Even though it may be not

insecure to everybody, it serves no purpose.

MR. SCHLAFLY: It serves no purpose. Nobody uses it. It's insecure.

THE COURT: It provides a way for transmitting messages that may be not totally secret, but does it provide a system for transmitting and receiving messages?

MR. SCHLAFLY: It does provide a system for sending and receiving messages, that's correct.

However, it states in its objectives -- it states, as its objective, to do this securely, and the method it describes is not secure.

Furthermore, all of the claims refer to a certain computational infeasibility, okay? Now, what that means is that if you wanted to break it, you know, maybe you could if you had millions of years of computer time or something, but there's no feasible way to break it with some reasonable amount of computer time, and that's specifically said right in the claims.

However, these papers that were published in the '80's showed that, in fact, it is feasible to break it, that with fairly small amounts of computer time, you can. You can decode the messages and make the system worthless.

THE COURT: Okay. Thank you. Response to that?

MR. FLINN: I wanted to -- not to disrupt the flow of things, but I want to make one brief comment on the publication issue on the Diffie-Hellman that was raised, because

I think it illustrates the burden of proof problem Mr. Schlafly has. Mr. Schlafly points to an August paper dated August 1976 for the proposition that there was disclosure.

Now the patent was filed in September. If that paper was sent in October, then the paper has got nothing to do with this. It has no bearing on the validity of the patent, and he cannot find a witness who says, "I got it in October as opposed to August." He needs a witness who says, A), "I got it in August," and B), "I got it with no restrictions." The person he got the paper from simply couldn't recall back that far.

The paper, unfortunately, is illustrative of the fact that he simply cannot get the facts that he needs to support this theory.

Let me turn directly to the Hellman-Merkle patent and recall its place in the development of this field of public key cryptography. It is, I think all the people in the room would agree, perhaps some more grudgingly than others, that it is the pioneering patent.

It was the patent which broadly claimed the discovery of the concept of public key, and in its specification it disclosed a public key way of doing public key cryptography, the so-called trap door knapsack.

It's important to bear in mind the difference between the specifications of the patent and the claims of the patents. The claims of the patents measure what you're entitled

to when it comes to infringement.

The specification requirements have two elements to them. You have to have an enabling disclosure; that is, you have to disclose one way which works. You can claim in your patent all the ways. If you are the pioneering patent, you only have to disclose one way that it works.

And secondly, you have to disclose the so-called best mode of those. And it's very, very important, and dispositive in this case, that the measurement of both requirements, enablement and best mode, are measured at the time the application is filed. The law could not be clearer on this. In Re: Hogan is the leading case on that and it is cited in our papers.

And with regard to best mode, that was raised in the reply papers, not inappropriately because we certainly did make our cross-motion, but I wanted to call the court's attention to a case that establishes the identical principal for best mode as it does for enablement, which is that it is measured at the time the application is filed. One of many cases is <u>Glaxo</u>

<u>Incorporated</u>, G-l-a-x-o, <u>versus Novopharm</u>, N-o-v-o-p-h-a-r-m.

It is a Federal Circuit case from 1995, and the citation is 52, Federal Reporter3rd, 1043, and the relevant language comes at page 1050 of that decision.

Let me first talk about enablement. Beginning -- the first thing I'm going to say.

THE COURT: Who wrote the opinion?

MR. FLINN: Beg your pardon?

THE COURT: Who wrote the opinion?

MR. FLINN: I think it was en banc. No, it's not en banc. It was by Judges Archer, Rich and Mayer of the Federal Circuit Court of Appeals.

THE COURT: Okay.

MR. FLINN: But this is not a controversial issue. It appears in the Chisum Treatis on patents and is a well establish issue of law.

But let me look to enablement, because that is fully discussed in the briefs. At first, the first part of -- the first observation I will make will assume something that the record does not support. It will assume that all trap door knapsacks are broken, and that is not true, but we will assume it for purposes of the argument.

that Mr. Schlafly sites in support of the proposition that they are broken, they date from the 1980's. In 1977, no one knew how to break trap door knapsacks. From 1977 until 1982, you could use a trap door knapsack and no one, because the attack had not been invented yet, could break your code. So there was no question that at the time the patent application was filed, trap door knapsacks were secure. It just so happened that advances in mathematics allowed people to discover a way to attack them.

I would note that with one exception, no cryptography system is proven secure. People simply don't know how to break them, and they are secure as long as A), computers aren't fast enough, or B), people aren't smart enough to break them. And the court is probably aware that quite recently, within the last few years, the notorious Fermat's Last Theorem, which remained unsolved for hundreds of years, was finally proven. I don't think anyone would say if Fermat's Last Theorum had some cryptographic use that a system that was secure for hundreds of years was not useful.

The same principal applies. The <u>In Re: Hogan</u> case is absolutely dispositive on its motion. Even if trap door knapsacks were completely broken in the 1980's, the disclosure nonetheless meets the enabling requirement.

Now let me turn to specifically what the record is, because the record is a little bit different than the popular myth that was floating around, and the myth exists because cryptography bears a certain relationship to banking in that bankers rely as much on the perception of security as opposed to the reality of security.

There's no question that some categories of trap door knapsacks were broken. The perception of the security of trap door knapsacks was weakened, and even one the co-inventors, Dr. Merkle, said he wouldn't use them. I can't prove to you that the ones that haven't been broken are immune. I'm going to

use what's out there. So the fact that, quote, "nobody uses it" is certainly not evidence that all of them were broken.

The documents that we submitted with our papers remained part of an uncontradicted record. The recipient of the \$1,000 prize admitted that he couldn't break all knapsacks. The high density multiplicative knapsacks remain secure today. There's no evidence that they particularly were broken, ever, and it is simply not a preferred method of implementation.

But there remains currently an enabling disclosure, so even if the law were not as crystal clear that it doesn't matter what happened earlier, the record here does not allow Mr. Schlafly to prevail simply because all there is remaining are enabling modes.

Now let me turn to the best mode issue, because I believe that fails for all the reasons I said. There was another one. This is also supported by the same citation to the Glaxo decision. The best mode requirement requires evidence that the inventor at the time of the application subjectively believed that there was a better mode than was disclosed. It requires actual evidence of subjective belief.

Now, people often satisfy that by showing that there was a product that was sold at the time the application was made which was manufactured with a different technique. That's how one tends to prove these.

But that is not in some writing or internal

memoranda, and we don't have that here. We simply have evidence because certain ones were broken later, the inventor doesn't emphasize or disclose or make sure to make them absolutely secure. You do multiplicatives at high density.

Now, there's a reason -- there's an illustration why the best mode requirement is a subjective one. There are tradeoffs in the implementation of any technology, and cryptography is no excuse. As the plaintiff concedes in his reply papers, the more security you get, the bigger numbers you have to use, and that requires more computer time to generate. You may need a number so big that it's impractical to use that method.

There's a faster way of achieving the same security. The inventor might say, "In my own mind, I would not use the biggest possible number. I would use a smaller number because it takes less time to do the encryption." The inventor makes the tradeoff in terms of what's the best way of implementing the technology.

So even if there was a more secure way that the inventor did not emphasize in the patent application, a good reason would be the inventor did not subjectively believe at the time that that was the best way. We have no evidence, and we have cited none from the depositions of any of the inventors, that they subjectively, at the time the invention was made, believed that.

So I believe that ends the inquiry on the Hellman-Merkle patent. I believe Mr. Schlafly is correct in his argument respecting statutory subject matter. Are we patenting on algorithm or not is the principal argument he raises with regard to the RSA patent, and I'm sure my colleague, Mr. Moore, will ably respond to that issue.

So unless there is something, and I cannot believe it would happen, that he would ever forget, I would defer to his argument, because I believe it would apply equally.

THE COURT: Thank you. If you talk the way you testify, this case is going to take awhile.

This has been very, very helpful to me and I have a much better flavor for what the big issues are.

MR. SCHLAFLY: I'd like to add a little more before we wrap up. There are a couple points I'd like to make in direct response.

THE COURT: Very briefly, and then if anyone else would like to put a plug for their position, I understand.

MR. SCHLAFLY: I'd like to say a couple things.

First of all, I don't know why Mr. Flinn makes such a big deal of the best mode. Sure, it's whatever the inventor says is the best mode. It does not disclose the best mode. It doesn't say anywhere in the specification what the best mode is.

Okay. Secondly, there has to be -- there has to be some enabling embodiment. There has to be some mode disclosed

that works. You can't say, "Well, I disclosed my best mode and it doesn't work, but there may be some other mode which I may or may not have known about."

THE COURT: He said it did work for 10 or 15 years, didn't he?

MR. SCHLAFLY: I'd like to get to that. No, it didn't. And this is -- there's kind of a general perception that the strength of some cryptography systems depend on outsmarting the person at the other end, that any cryptography system can be broken with just enough smarts or something.

However, that's just not true. The whole point of this public key cryptography system is to get something which is infeasible to break; that is, there are some problems which are just hard and no matter how clever you are, there are limits to breaking it. It doesn't matter how smart you are. There's some very large number of calculations that have to be done to break it, and if the problem is set up right, that number of calculations is just so many that it's millions of years of computer time and no one will ever be able to do it.

THE COURT: Isn't that on a variable term? I mean infeasible for some person might be feasible for someone else.

MR. SCHLAFLY: Yeah. The inventors gave a precise definition. They said, "It's infeasible if it takes 10 to the power of 30 computer operations to break it," and that makes it a very precise thing. You have to look at it that way, that

their invention is either, I mean, it's either feasible to break or it's infeasible. That's the precise thing.

This wording appears in the patent claims, and if it appears in the patent claims, it's supposed to be something precise, and that's the precise meaning they gave to it. If it takes fewer than 10 to the power of 30 operations to break, and if it took those operations, if it were possible to do it in 1977, then it's insecure, even if nobody knew how to do it in 1977, because —

THE COURT: Impossible or infeasible in 1977?

MR. SCHLAFLY: If there is a method, if there is a feasible method for breaking the cryptography system in 1977, then it's not secure, even if people haven't figured out that method yet.

THE COURT: Even if the method doesn't exist, it's feasible?

MR. SCHLAFLY: Even if someone hasn't worked it out and published it.

THE COURT: With the rapid development of technology, something that seems infeasible today is routine tomorrow.

MR. SCHLAFLY: That could happen. But there are other things like, for example, the MIT patent that's based on multiplying prime numbers. It's still the case that what they said in 1977 about multiplying together two prime numbers, and

the difficulty of factors, it is still infeasible to factor that. There are problems which are difficult.

Let me give an analogy on this sort of problem that Mr. Flinn gets these citations that say that enablement and best mode is based on what's there at the time. Those cases are talking about something completely different; that is, they're talking about — they're talking about whether or not the inventor has provided enough information for somebody to practice it, and then there are issues about whether the inventor kept out details or whatever.

Let's consider a hypothetical. Suppose I invented a drug that I claim cures cancer, and I have some theoretical reason for why it cures cancer and I apply for a patent on it. I give the patent office this theoretical reason as to why it cures cancer, and let's say the examiner is convinced. He says, "Sure, it cures cancer."

Then let's say five years later, people do experiments and they give the drugs to people and everybody dies. Then I think it would be fair to say that the invention didn't work.

If somebody went in to break it, it would be fair to take those studies from five years later and say, "Look, we tried this. It doesn't work."

You couldn't come back and say, "Back when I filed for this patent, I had this reason for thinking that it would

work and it's unfair to cite this later study." The later study shows that the invention doesn't work, then it never worked. I mean, maybe people don't know that it never worked, but it never worked, and therefore it is improper subject matter for a patent.

Okay. I just want to make one other point, and that is that Mr. Flinn also has some questions about whether trap door knapsacks are broken and claims that some high density trap door knapsacks have not been broken. I think this is flatly disputed by the record.

First of all, the Hellman-Merkle patent does not disclose any high density knapsacks. The embodiments in that patent are all extremely low density knapsacks.

And secondly, if you look at those exhibits, there's paper after paper published, referee journals, respected authors, respected publications, and paper after paper says the trap door knapsack has been broken, and there is no variation of the Hellman-Merkle trap door knapsack which is secure.

This has been broken to the extent of -- it's rare that any invention is shown to be invalid to the extent that something like this is. These papers, they not only say it's invalid, they give a step-by-step algorithm. It says, "You follow these steps and you can decode the message." It's explicit.

You don't have to take their word for it. You can

go read the paper. You follow the steps and it's broken. It's been published. It's been published in the '80's. There's been plenty of time for people to analyze it. People agree that the analysis is sound and that the trap door knapsacks have been broken.

In fact, you have the inventor himself. He paid off a \$100 bet when one embodiment got broken, and then he paid off a \$1,000 bet when another embodiment got broken.

THE COURT: Thank you, very much.

I'll conclude the hearing now. We may ask for further argument. I'm not sure, but if I feel we can use it, we will do so. This has been very helpful to me to have the argument this morning. Thank you very much.

(Proceedings concluded.)

STATE OF CALIFORNIA 1 SS. 2 COUNTY OF SANTA CLARA) 3 I, the undersigned, a Certified Shorthand Reporter of 4 5 the State of California, hereby certify that the above 6 proceedings were held at the time and place herein stated; that 7 the statements by Counsel, The Court and other parties were 8 reported by me, a Certified Shorthand Reporter and disinterested 9 person, and were thereafter transcribed under my direction into 10 typewriting, and that the foregoing is a full, complete and true 11 record of said proceedings. 12 13 I further certify that I am not of counsel or attorney 14 for either or any of the parties in the foregoing proceedings 15 and caption named, nor am I in any way interested in the outcome 16 of the cause named in said caption. 17 18 IN WITNESS WHEREOF, I have hereunto set my hand this 19 27th day of February 1996. 20 21 Le Anne Shortridge, CAR 22 23 24 25